

SEATTLE PUBLIC UTILITIES

ENVIRONMENTAL CHECKLIST

The *2007 Water System Plan* is the latest long-range plan for the Seattle Public Utilities (SPU) water system, as required every six years under Washington State Department of Health (WDOH) regulations. SPU's last water system plan was completed in 2001. Through the *2007 Water System Plan*, SPU is proposing and planning to implement a number of new and updated water system policies, programs, and projects. The proposed plan addresses SPU's water system capital facilities improvements identified for 2007 through 2030 as well as its water system operation and maintenance activities. Implementation of the *2007 Water System Plan* would involve future evaluation and development of programs and capital improvement projects designed to address SPU's identified water system issues and needs.

Environmental review of the *2007 Water System Plan* has been conducted in accordance with the Washington State Environmental Policy Act or SEPA (RCW 43.21C), the SEPA regulations (Chapter 197-11 WAC), and the City of Seattle SEPA Ordinance (SMC Chapter 25.05). SPU has prepared this SEPA Environmental Checklist under the nonproject and phased review provisions of SEPA. Nonproject actions, such as the adoption of the proposed plan, are broader than a single site-specific project (Section 197-11-774 WAC). Phased review covers general matters in a broader environmental document, with subsequent narrower documents that concentrate on the issues relating to specific projects (Section WAC 197-11-776 WAC). This checklist addresses both the potential nonproject impacts (Subpart D, Supplemental Sheet for Nonproject Actions) and the types of anticipated projects and their general range of potential environmental impacts (Subpart B, Environmental Elements).

A. BACKGROUND

A1. Name of proposed project, if applicable:

Seattle Public Utilities 2007 Water System Plan

A2. Name of applicant:

City of Seattle, Seattle Public Utilities

A3. Address and phone number of applicant and contact person:

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A4. Date checklist prepared:

August 3, 2006

A5. Agency requesting checklist:

Seattle Public Utilities

A6. Proposed timing or schedule (including phasing, if applicable):

SPU has developed the *2007 Water System Plan* to evaluate proposed policies, future infrastructure projects, and operations and maintenance (O&M) activities for SPU's

drinking water system, for the period 2007 through 2030. SPU's plan is updated every six years to meet state regulatory requirements. Implementation of the proposed plan would be phased. Some elements of the plan may be implemented immediately, while others could be implemented in future years.

A7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal?

SPU engages in a number of activities related to its water system, including planning, engineering, operation, maintenance, financial planning, and customer service. SPU would continue to focus on programs and initiatives to address water capital and O&M needs. SPU would periodically review and update the *2007 Water System Plan*, as needed. WDOH requires an update of SPU's water system plan every six years. Any future updates of the proposed plan would undergo environmental review under SEPA.

The *2007 Water System Plan* also includes ongoing water programs and maintenance activities such as infrastructure replacement and in-town reservoir covering/burying projects. Future programs and projects to implement the proposed plan would undergo environmental review at the time projects are specifically proposed, to the extent applicable. Refer to Response A11 below. Related planning efforts are described in detail in Chapter 2 of the *2007 Water System Plan*.

A8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

A large body of existing scientific, planning, and environmental information, comprising published and unpublished data, analyses, and literature, provided a basis for the analysis and development of the *2007 Water System Plan*. Supporting environmental and other technical information is provided in the appendices of the proposed plan.

Environmental and planning documents have been prepared for several Seattle programs and projects related to the *2007 Water System Plan*, and to this SEPA Environmental Checklist. These include:

- Queen Anne Water Tank Replacement, SEPA DNS and Environmental Checklist, June 2005.
- Beacon Reservoir Replacement Project, SEPA DNS and Environmental Checklist, June 2005.
- Myrtle Reservoir Replacement Project, SEPA DNS and Checklist, June 2005.
- Cedar River Sockeye Hatchery Project, SEPA Final Supplemental Environmental Impact Statement, July 2005.
- SPU Cedar River Transfer of Water Right, SEPA DNS and Environmental Checklist, May 2006.
- SPU *2001 Water System Plan* and SEPA DNS and Environmental Checklist, July 2000.
- Cedar River Watershed Secondary Use Analysis, Final Environmental Impact Statement, January 1988.
- Tolt Pipeline No. 2, Phases II and III, Final Supplemental SEPA Environmental Impact Statement, January 1996.
- Seattle Water Department COMPLAN Environmental Impact Statement, 1985.
- 1993 Comprehensive Regional Water Supply Plan SEPA Environmental Impact Statement.

- Cedar River Watershed Habitat Conservation Plan (HCP) NEPA Environmental Assessment/SEPA Environmental Impact Statement, 1999.
- Cedar River Municipal Watershed Cultural Resources Management Plan, 2004.
- Proposed Second Supply Project Agreement, Final Environmental Impact Statement, October 2000.

A9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no other applications pending for governmental approvals of other proposals directly affecting this proposal. However, individual projects related to the proposed plan may require additional approvals, and such approvals would be sought (as applicable) for the individual projects prior to construction or development. Other, unrelated (public and private) proposals and government approvals may be pending that could affect SPU's water supply service area, the Cedar and Tolt Municipal Watersheds, and/or the SPU pipeline corridors between the service area and the municipal watersheds.

A10. List any government approvals or permits that will be needed for your proposal, if known.

Regulations require the Seattle City Council to approve the *2007 Water System Plan* through an ordinance. City Council adoption would repeal any prior policies in conflict with the proposed plan and would authorize SPU to transmit the plan to the appropriate state and county agencies.

WDOH reviews and approves six-year updates of water system plans, as required under Section 246-290-100 WAC. The King County Utilities Technical Review Committee (UTRC) reviews water utility comprehensive plans for compliance with King County Code Chapter 13.24. The UTRC recommends approval or denial to the King County Council, which takes action by ordinance.

More specific information on approvals or permits for projects anticipated under the proposed plan would be determined during project-level environmental review. Future programs and projects that would result from the *2007 Water System Plan* must comply with applicable federal, state, and local regulations. Future projects to implement the proposed plan could require certain federal, state, and local government approvals and permits, including SEPA review, and potentially NEPA review if a project involves federal funding or agency approval.

A11. Give brief, complete description of your proposal, including the proposed uses and the site of the project. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

SPU operates and maintains its regional water system, the largest in Washington, serving an area with a population of more than 1.45 million. SPU's two main sources of water supply are the Tolt and Cedar River Municipal Watersheds, each with its own treatment facilities. The Seattle Well Fields are available to supplement the Tolt and Cedar supply sources during peak demand seasons and in emergencies. SPU's high-quality drinking water is delivered to its customers through an existing network of approximately 1,800 miles of transmission and distribution system pipelines.

In its continued efforts to provide reliable and high-quality water to its customers,

SPU has prepared the *2007 Water System Plan* in accordance with state regulatory requirements. The *2007 Water System Plan* presents SPU's water system capital facilities and the O&M "roadmap" for the next six years and beyond. The proposed plan is described in detail in the Public Review Draft of the *2007 Water System Plan*, July 2006. The *2007 Water System Plan* is available on the SPU website, at: www.seattle.gov/util/About_SPU.

Objectives

Section 246-290-100 WAC requires water purveyors having 1,000 or more service connections to prepare and submit new or updated water system plans to WDOH every six years. According to the WAC, the purposes of such a plan are to:

- a) Demonstrate the system's operational, technical, managerial, and financial capability to achieve and maintain compliance with relevant local, state, and federal plans and regulations; and
- b) Demonstrate how the system will address present and future needs in a manner consistent with other relevant plans and local, state, and federal laws, including applicable land use plans.

SPU has prepared the *2007 Water System Plan* as its long-range water system plan to meet these state regulations.

Plan Summary

The *2007 Water System Plan* includes proposed policies, programs, and projects relevant to SPU's water system. Many are continuations of existing SPU activities. The SPU water service area remains unchanged under the proposed plan, and no new source of water supply is anticipated to be needed within the plan's planning horizon. Key changes in the proposed plan from previous water system plans include revised and updated policies, new conservation goals, updated asset management procedures, changes in the place of use of the Cedar River and Lake Youngs water right claims, ongoing maintenance activities, and several capital infrastructure projects. Some programs and policies, such as water conservation, could affect the environment at the regional level.

The *2007 Water System Plan* includes planning relative to a number of programs and major capital projects. Some of the large capital projects and programs in the proposed plan have been identified in previous planning documents and analyzed through previous SEPA documents. Previous environmental and planning documents are identified in Response A8 above.

The *2007 Water System Plan* includes ongoing O&M activities. Minor maintenance activities generally are not subject to environmental review under SEPA. Larger maintenance activities and capital improvement projects could require future project-level SEPA review, where applicable, prior to final design and implementation. Potential infrastructure projects identified in the proposed plan include several in-town reservoir covering/burying projects, Chester Morse Lake Dead Storage Facilities Project, Cedar Moraine Safety Improvements Project, and Landsburg Flood Passage Improvements Project. Under the SEPA nonproject and phased review provisions, the range of potential impacts of these anticipated types of projects are discussed at a broader level, rather than at a more detailed level of individual project and site-

specific impacts.

The *2007 Water System Plan* articulates SPU's commitment to ensuring a long-term, high-quality water supply while protecting the environment and instream resources. One key policy in the proposed plan is the formal use of asset management approaches and principles in SPU's business decision-making process in order to demonstrably provide the highest value to ratepayers over the long term. Asset management involves making decisions on capital projects and O&M work based on financial, social, and environmental costs and benefits, otherwise known as triple bottom line.

SPU has organized its water utility into business areas, each of which has responsibility for managing a facet of the overall water utility. Each business area has identified policies and programs to guide it into the next six years and beyond. The major components of the *2007 Water System Plan* are summarized by business area below.

Water Resources Business Area

The Water Resource business area focuses on programs to ensure that SPU water customers have sufficient water to meet their short-term and long-term needs, while protecting instream resources. Key findings and actions of the proposed plan are as follows:

- No new source of water supply is needed until after 2060 and, with due consideration of the uncertainties in factors that influence water demand and the potential supply impacts that could result from future climate change, SPU is not actively developing any new water supply sources at this time.
- SPU would continue its commitment to existing water conservation programs. SPU also would prepare to implement conservation measures for an additional 15-mgd of average annual savings from 2011 through 2030.
- As allowed under the 2003 Municipal Water Law, the place of use of the Cedar River and Lake Youngs water right claims would be changed to the SPU service area as shown in Figure 2-1 in the *2007 Water System Plan*, which is included for reference at the end of this document.
- SPU would address identified infrastructure improvement needs, including evaluating options and determining cost-effective and reliable approaches for delivering water during drought emergencies under the Chester Morse Lake Dead Storage Facilities Project; completing remedial work and monitoring improvements under the Cedar Moraine Safety Improvements Project; and implementing the Landsburg Flood Passage Improvements Project.

Water Quality and Treatment Business Area

The Water Quality and Treatment business area ensures that SPU provides water that meets or exceeds drinking water quality regulations to protect public health, and tastes and looks pleasing to customers. Key findings and actions identified in the proposed plan are as follows:

- SPU would continue implementation of its open in-town reservoir covering and replacement program to protect water quality within its transmission and

distribution systems, including potential decommissioning of some in-town reservoirs.

- SPU would continue water quality monitoring and complete investigations to improve or protect drinking water quality, including completion of studies for Kerriston Road and Lake Youngs.

Transmission and Distribution Business Area

SPU's water transmission system consists of the large diameter pipelines, storage facilities, pump stations, and related infrastructure used to convey treated water to the distribution systems of SPU's wholesale customers and its own retail service area. Key findings and actions identified in the proposed plan are as follows:

- SPU would implement strategies for managing its transmission and distribution system assets, including implementation of cathodic protection programs to extend the life of transmission pipelines.
- SPU would improve the ability and flexibility of its water system to deliver Cedar and Tolt source water throughout the existing service area by implementing transfer improvements that prove to have a positive net present value to customers.
- SPU would renew or replace aging transmission pipelines and distribution system water mains using revised policies and procedures under the proposed plan.

A12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The planning area for the *2007 Water System Plan* includes the entire SPU water service area, the Tolt River and Cedar River Municipal Watersheds, and the SPU pipeline corridors that connect the municipal watersheds and supply sources to SPU's service area. The locations of the SPU water service area and the municipal watersheds are shown in Figure 2-1 from the *2007 Water System Plan*, which is included for reference at the end of this document.

As shown in the figure, SPU's water service and planning area generally includes the city of Seattle, along with surrounding suburban areas immediately to the north and south, and similar areas extending east of Lake Washington to slightly beyond North Bend. The SPU water service area also includes the retail service areas of SPU's current and potential wholesale customers, and areas that SPU does not now currently serve but could in the future. SPU's current water service area maintains the same area and extent established with SPU's *1980 Water System Plan*.

The planning area includes all of the city of Seattle, much of the surrounding areas of King County, and a small portion of southwest Snohomish County. Cities located within the planning area include Seattle, Shoreline, Edmonds, Lake Forest Park, Kenmore, Bothell, Woodinville, Kirkland, Redmond, Issaquah, Bellevue, Mercer

Island, Burien, Normandy Park, Des Moines, Tukwila, Renton, Kent, SeaTac, North Bend, Duvall, and Carnation.

Future water programs and projects to implement the proposed *2007 Water System Plan* could occur at various locations within the planning area. The precise locations of specific water system projects would be identified in the future when individual water system projects are implemented.

B. ENVIRONMENTAL ELEMENTS

B1. Earth

a. General description of the site:

☒ Flat ☒ Rolling ☒ Hilly ☒ Steep Slopes ☐ Mountains
☐ Other:

More specific information on the topography and earth characteristics at individual sites would be determined during project-level environmental review. In general, the planning area is characterized by a wide variety of topographical features, ranging from flat river valleys to ravines and hillsides. The City of Seattle is located on a series of hills and intervening valleys in the Puget Sound lowlands. The Cedar and Tolt Municipal Watersheds are located in a more mountainous terrain of the Cascade foothills.

b. What is the steepest slope on the site (approximate percent slope)?

More specific information on steep slopes of individual sites would be determined during project-level environmental review. Slopes in the planning area generally range from 0 to 40 percent, with some steeper slopes present.

c. What general types of soils are found on the site (for example, clay sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

SPU would identify site-specific soils during future SEPA review when individual projects are proposed. Soils in the vicinity of existing SPU facilities are likely to include at least partial fill.

As the result of several periods of glaciation, a layer of hard, cemented, glacial till underlies much of the planning area. The permeable soils overlying the till are shallow, ranging from 2 to 4 feet deep, while the impermeable till layer may be quite thick. Compact clay (hardpan) often underlies the surface soils.

As a highly urbanized area, the native soils in much of the planning area have been extensively altered. The predominant soil types in the area are artificial fill, alluvial soils, and Alderwood series soils. Alderwood series soil predominantly occurs in upland areas and is the most common soil type in King County, while alluvial soils occur in stream and river valleys.

Because much of the planning area has been previously developed for urban and suburban uses, prime farmland is no longer present within Seattle and adjacent cities. Remaining areas of prime farmland are located primarily outside the urban growth areas of Seattle, such as areas of the Snoqualmie and Green River Valleys.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe:

More specific information on unstable soils would be determined during project-level environmental review. SPU would identify site-specific unstable soils and other geological hazards during SEPA review when individual projects are proposed. All future projects would comply with the applicable provisions of the local critical areas ordinances.

Unstable soils in the planning area primarily occur in areas of steep slopes, and in areas of artificial fill or alluvial soils with a shallow water table that may lead to soil liquefaction during earthquakes. Areas where these conditions may exist have been mapped by local jurisdictions as critical areas. When future water system projects undergo design and environmental review, SPU would review any available maps of sensitive areas prepared by the applicable local jurisdictions.

SPU has studied the stability of the Cedar moraine slope area near its Masonry Dam, and has identified a slope near the head of West Boxley Creek with the potential for a groundwater burst flood during a large earthquake. SPU could undertake additional field investigations and would evaluate options to improve slope stability as determined to be appropriate under the potential Cedar Moraine Safety Improvements Project.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Filling and/or grading activity could occur in association with some future water system projects. In general, the amounts of grading and filling that would be required for most O&M projects would be relatively modest. More specific information on filling and grading would be determined during project-level design and environmental review. All SPU projects would comply with the applicable local, state, and federal regulations and permits required for grading and filling activities.

Some projects, such as pipeline projects, could require excavation and back filling. In-town reservoir covering/burying projects would involve excavation at existing in-town reservoir sites. The potential Chester Morse Lake Dead Storage Facilities Project could include new pipelines and tunnel options, and various options for stabilizing the outlet channel. The potential Cedar Moraine Safety Improvements Project could include three horizontal drainage tunnels.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe:

More specific information on the potential for erosion would be determined during environmental review and permitting of individual projects. Future SPU projects could involve clearing and grading activities during construction, which would be a short-term impact. Clearing and grading during construction could result in exposed soils and erosion, if uncontrolled. Erosion would be controlled with site-specific mitigation measures, which would be determined when individual projects are reviewed under SEPA and permitted, where applicable. Once constructed, operation of SPU water system projects generally would not have the potential for long-term erosion.

The potential Landsburg Flood Passage Improvements Project would reduce the risk of overtopping of the dam during large flood events, which would reduce erosion of the embankments. Reducing or preventing bank erosion at Landsburg

would be a positive impact.

Construction activities would include best management practices (BMPs) to reduce erosion. All future water system projects would comply with the applicable erosion control provisions of the local jurisdictions, such as the Seattle Storm Water Grading and Drainage Control Code.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

More specific information on the potential percentages of impervious surfaces would be determined during design and environmental review of individual projects. Some SPU projects could require new impervious surfaces, although in general, most O&M projects would result in a relatively minor amount of additional impervious surfaces.

Related to runoff, in-town reservoir covering/burying projects could create small amounts of new impervious surfaces. Future in-town reservoirs would be designed with drainage systems that would control any runoff from impervious surfaces. Many O&M projects would occur in urban areas or within roadway rights-of-way, which already have a large amount of impervious surfaces. Potential infrastructure projects in the relatively undeveloped Cedar and Tolt Municipal Watersheds could involve minor amounts of additional impervious surface.

SPU would identify the amount of impervious surface during design and SEPA review when individual projects are proposed. All future projects would comply with the applicable storm water requirements of the local jurisdictions.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

Site-specific mitigation measures to reduce or control erosion would be developed during environmental and permitting review, where applicable, of individual projects. Any SPU projects would be subject to the applicable storm water, grading, and critical areas requirements of the local permitting jurisdiction.

Construction of future projects would employ BMPs to reduce or control potential project-specific erosion. BMPs could include temporary erosion and control measures, surface water pollution prevention plans, and spill prevention control and countermeasures plans. Example of typical BMPs would include installing filter fabric fences or hay bales, covering exposed soils, using temporary soil covers such as mulch, diverting stormwater with temporary berms, and using settling ponds or grass-lined swales to prevent sediment from moving into receiving waters and storm drains. Site-specific BMPs would be developed during project-level environmental review and permitting.

B2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

More specific information on the types and quantities of air emissions, if present,

would be determined during environmental review and permitting of individual projects. Air emissions could result from some projects, particularly during construction, although most O&M projects anticipated under the proposal generally would not produce additional air emissions during operation. One option of the Chester Morse Lake Dead Storage Facilities Project could replace the existing on-site diesel generators with electrical power, which likely would reduce air emissions within the Cedar River Municipal Watershed. Most potential emissions of O&M projects would be associated with construction activities, which could result in short-term and localized impacts.

Construction of individual projects would temporarily generate particulate matter and small amounts of engine exhaust. Potential construction impacts would be most noticeable at nearby locations such as residences and other sensitive receptors. To reduce construction emissions, projects would include reasonable construction mitigation measures and would comply with the Puget Sound Clean Air Agency (PSCAA) regulations to minimize fugitive particulate matter.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Future water facilities contemplated under the proposed plan would not be affected by off-site emissions or odors. There are no known off-site sources of emissions or odor that would affect this proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Construction of future water system projects would include site-specific mitigation measures to reduce construction emissions, where applicable. These could include spraying areas of exposed soil with water for dust control, regular street cleaning, and reducing exhaust emissions by minimizing vehicle and equipment idling. Construction activities would comply with the PSCAA's requirements for reasonable precautions to minimize fugitive dust. Construction equipment also would include emission-control devices on gasoline and diesel engines to reduce carbon monoxide (CO) and particulate emissions. Potential construction mitigation would be evaluated during future environmental review.

B3. Water

a. Surface:

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If so, describe type and provide names. If appropriate, state what stream or river or water body it flows into.

More specific information on surface water bodies near individual sites would be determined during project-level environmental review. In general, the planning area is characterized by a wide variety of surface water features, including marine areas, rivers, lakes, artificial reservoirs, and creeks. Potential infrastructure projects could occur in the vicinity of the Puget Sound, Lake Washington, Chester Morse Lake, Rattlesnake Lake, Lake Youngs, South Fork Tolt Reservoir, Tolt River, Cedar River, Snoqualmie River, Green/Duwamish River, and their tributaries (Water Resource Inventory Areas 7, 8, and 9).

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If so, please describe and attach available plans.

More specific information on potential work over, in, or adjacent to surface waters would be determined during project-level environmental review. Some of the future capital and O&M projects could occur in and around natural surface waters and SPU's in-town reservoirs.

The in-town reservoir covering/burying projects would require work in or immediately adjacent to these existing, artificial water bodies. Capital and O&M projects could occur in the Cedar or Tolt Municipal Watersheds. Maintenance and other improvement projects in urban areas could occur within public rights-of-way but also could cross surface waters.

The potential infrastructure projects, including the Chester Morse Lake Dead Storage Facilities Project, Cedar Moraine Safety Improvements Project, and Landsburg Flood Passage Improvements Project, could require work in or adjacent to surface waters.

The existing Chester Morse Lake pumping plants consist of barge-mounted pumps on the lake. The potential Chester Morse Lake Dead Storage Facilities Project could require work in or adjacent to Chester Morse Lake. Options to modify the existing pumping plants could require work within the lake. Another option would replace the existing system with a land-based pump station and new pipelines in or adjacent to Chester Morse Lake.

The potential Cedar Moraine Safety Improvements Project could require work in the Cedar Moraine slope area, near Chester Morse Lake, within the Cedar River and Snoqualmie River watersheds. Potential improvements likely would include three horizontal drainage tunnels extending about 100 feet into the slope. As with the existing seeps from the moraine, the water from the drains would flow to natural drainage courses in the area, and would not change the flow regimes of the Cedar and Snoqualmie Rivers.

The Landsburg Flood Passage Improvements Project would require work near the Cedar River. The potential alternative would replace two existing spillway gates with one larger, radial gate, and would install a trash rake system for debris handling. After completion of these improvements, SPU crews would be better able to remove logs and other flood debris from the face of Landsburg Dam. This would reduce the risk of overtopping the dam during large flood events as well as the potential for severe erosion of the embankments and the risk of dam failure.

The potential for work affecting surface waters would be identified during future design, SEPA review, and permitting of individual projects. All future projects would comply with the applicable provisions of the Seattle Shoreline Master Program (or other local Shoreline Master Program, as applicable) and other local, state, and federal regulations to protect surface waters.

(3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

More specific information on the amount, location, and source of fill or dredge material would be determined during project-level environmental review. Fill and/or dredge activity could occur in association with some future water system projects. Potential creek and river crossings could require in-water work, where some excavation and fill could occur to install and backfill the pipelines. The amount and location of fill and/or dredge material would be determined during future design and environmental review of individual projects. All future projects would comply with the applicable local, state, and federal regulations and permitting concerning fill and dredge materials.

(4) Will the proposal require surface water withdrawals or diversions? If so, give general description, purpose, and approximate quantities if known.

The programs and projects under the proposed plan are designed to provide high-quality drinking water to SPU customers and to maintain instream flows. Water is currently withdrawn from the Cedar and South Fork Tolt Rivers, as well as Seattle Well Fields, in accordance with existing regulations, permits, agreements, and water rights. SPU has determined that it has adequate supplies of water for its customers as well as for the instream needs of the South Fork Tolt and Cedar Rivers. SPU also has determined that it would not likely need any additional sources of water supply before 2060, and therefore does not propose major new water withdrawals during the planning horizon. SPU would continue to implement programs to meet water conservation goals, which would further reduce the potential for new surface water withdrawals or diversions.

Individual water system projects could require temporary diversions of surface water during construction. Construction activities would comply with applicable regulations and permitting concerning surface water withdrawals and/or diversions.

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

More specific information on potential work within 100-year floodplains would be determined during project-level environmental review. Some of the future capital and O&M projects could occur in or near floodplains. Potential infrastructure projects, such as the Chester Morse Lake Dead Storage Facilities Project, Cedar Moraine Safety Improvements Project, and Landsburg Flood Passage Improvements Project, could occur in the Snoqualmie, Cedar, or Tolt drainages and their associated floodplains. Maintenance and other improvement projects would occur within developed and undeveloped public rights-of-way, but also could cross floodplains.

The potential for projects within the 100-year floodplain would be identified when individual projects are proposed and reviewed under SEPA. All future projects would comply with any floodplain regulations, where applicable.

(6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The programs and future projects under the proposed plan would not create any new long-term discharges of waste materials into surface waters. All

future water system projects would comply with applicable local, state, and federal regulations concerning discharges to surface waters.

Short-term discharges could occur during construction. Site preparation and construction activities for future water system projects could intermittently generate surface water discharges that would be considered temporary or short-term. Construction activities would include BMPs and other mitigation measures to prevent discharges into surface waters and would comply with applicable codes and regulations.

b. Ground:

(1) Will ground water be withdrawn, or will water be discharged to ground water? If so, give general description, purpose, and approximate quantities if known.

In addition to the major surface water supplies, SPU operates two small well fields in the Highline area of south King County to provide additional peak season capacity and emergency supply, as needed. A wellhead protection program is currently in place for these groundwater sources.

SPU has determined that it has adequate supplies of water for its customers and for instream flows in the Cedar and South Fork Tolt Rivers. SPU also has determined that it would not likely need a new source of water supply before 2060, and therefore does not propose major new ground water withdrawals for water supply within the planning horizon. SPU would continue to implement programs to meet water conservation goals.

More specific information on potential groundwater withdrawals or discharges would be determined during project-level environmental review. Individual water system projects are not expected to create any new long-term groundwater discharges or withdrawals. The Cedar Moraine Safety Improvements Project could modify relatively shallow groundwater drainage but would not change the overall flow regime.

Short-term impacts could occur during construction. Construction could require below-ground work and may result in the need for temporary dewatering to maintain dry construction conditions. Construction activities would include BMPs and other mitigation measures to prevent discharges into ground waters, and would comply with applicable codes and regulations.

The site-specific impacts on groundwater, if present, would be identified during future environmental review and permitting of individual projects.

(2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: domestic sewage; industrial, agricultural, etc.). Describe the general size of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

SPU water system projects would not directly discharge waste materials from animals, humans, or its operational activities to groundwater. Waste drainage from SPU facilities discharge into a public wastewater system and/or existing septic systems. Temporary restrooms used during

construction would be self contained and pumped out at regular intervals.

c. Water Runoff (including storm water):

- (1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

More specific information on the potential for runoff and identification of receiving waters, if present, would be determined during environmental review and permitting of individual projects. Construction activities could temporarily increase runoff, and associated erosion and sedimentation could affect water quality in the short term. Potential construction runoff and erosion would be controlled with site-specific BMPs and other mitigation measures. The design, construction, and operation of all future SPU projects would comply with the applicable storm water management requirements of the local storm water and drainage codes of the various permitting jurisdictions.

Some SPU projects could require impervious surfaces, although most capital and O&M projects would not create substantial amounts of additional impervious surfaces. In-town reservoir covering/burying projects could continue to inhibit groundwater infiltration, comparable to the existing condition. Future in-town reservoirs would be designed with drainage systems, and storm water would be collected and discharged into the storm drainage systems. See also Response B1.g above, on impervious surfaces.

- (2) Could waste materials enter ground or surface waters? If so, generally describe.**

Operation of SPU water system projects would not directly discharge waste materials of any kind into ground or surface waters. Human, animal, or operational wastes would not be discharged. Construction activities could temporarily discharge materials, which would be controlled with site-specific BMPs and other mitigation measures.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Construction activities would include mitigation measures to reduce potential surface water, groundwater, and runoff impacts, such as BMPs and other temporary erosion controls. SPU would prepare any required plans for pollution and spill prevention. Site-specific design features and mitigation measures would be identified during the future environmental review and permitting of individual projects, where applicable.

All future water system projects to implement the proposed plan would be designed, constructed, and operated to meet applicable local, state, and federal regulatory requirements to protect water resources. All SPU projects would obtain the necessary permits and approvals concerning surface water, groundwater, and storm water runoff. Future projects would comply with applicable local storm water and drainage codes of the appropriate permitting jurisdictions, for example the Seattle Storm Water Grading and Drainage Control Code.

B4. Plants

a. Check types of vegetation found on the site:

<input checked="" type="checkbox"/> Deciduous trees (check types): <input checked="" type="checkbox"/> alder <input checked="" type="checkbox"/> maple <input checked="" type="checkbox"/> aspen <input checked="" type="checkbox"/> other: various ornamentals
<input checked="" type="checkbox"/> Evergreen trees (check types): <input checked="" type="checkbox"/> fir <input checked="" type="checkbox"/> cedar <input checked="" type="checkbox"/> pine <input checked="" type="checkbox"/> other: various ornamentals
<input checked="" type="checkbox"/> Shrubs
<input checked="" type="checkbox"/> Grass
<input type="checkbox"/> Pasture
<input type="checkbox"/> Crop or grain
<input checked="" type="checkbox"/> Wet soil plants (check types): <input checked="" type="checkbox"/> cattail <input checked="" type="checkbox"/> buttercup <input checked="" type="checkbox"/> bullrush <input checked="" type="checkbox"/> skunk cabbage <input checked="" type="checkbox"/> Other: various native and exotic rushes, sedges, grasses, and non-herbaceous plants
<input checked="" type="checkbox"/> Water plants (check types): <input checked="" type="checkbox"/> water lily <input checked="" type="checkbox"/> eelgrass <input checked="" type="checkbox"/> milfoil <input checked="" type="checkbox"/> Other:
<input checked="" type="checkbox"/> Other types of vegetation: various other vascular and non-vascular plants.

More specific information on the types of vegetation near individual sites would be determined during project-level environmental review. In general, the planning area has a variety of vegetation types, including upland, riparian, and wetlands.

Seattle and adjacent cities and suburbs are developed urban areas, with few areas of native vegetation remaining. Urban and suburban development has altered much of the vegetation. In most developed areas, the existing vegetation includes coniferous and deciduous trees, mowed lawns, and landscaped areas. Turf and ornamental shrubs dominate the in-town reservoir sites. With the changes in land use, several non-native and invasive species have established themselves. Several areas of native vegetation, however, remain in the urban parklands and open spaces. The Cedar and Tolt Municipal Watersheds, in comparison, are primarily forestland.

b. What kind and amount of vegetation will be removed or altered?

More specific information on the kind and amount of vegetation to be removed or altered would be determined during environmental review and permitting of individual projects. Vegetation could be affected in association with some future water system projects, although most project sites have been previously developed and native vegetation altered. In general, potential O&M projects would require minimal clearing of vegetation. Many future water infrastructure projects would occur in developed urban and suburban areas, and the amounts of vegetation to be removed or altered likely would be relatively small, localized, and mostly limited to urban-type vegetation. For potential in-town reservoir covering/burying projects, disturbance to vegetation would be limited to the immediate project site. Some vegetation removal could be required in the vicinity of larger infrastructure projects. Vegetation on or adjacent to project sites, where present, could be disturbed by construction activities.

If areas of vegetation are removed or altered, vegetation would be restored following construction. Potential impacts and mitigation for vegetation would be evaluated during design and environmental review of individual projects.

c. List threatened or endangered species known to be on or near the site.

More specific information on threatened or endangered species near individual sites would be determined during project-level environmental review.

When future water system projects are proposed, SPU would identify known threatened or endangered species, if present. SPU then would search appropriate databases of listed plant species and contact appropriate agencies.

Because many of the project sites have been previously developed and native vegetation removed, the potential for impacts on threatened or endangered species is low at most urban and suburban locations. SPU would evaluate potential impacts and mitigation for threatened and endangered species during environmental review and permitting of individual projects. The design, construction, and operation of all future SPU projects would comply with federal and state requirements for threatened or endangered species.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Future water system projects would be designed to minimize potential impacts on vegetation. Where necessary to remove or alter areas of vegetation, vegetation would be restored following construction, according to SPU standard construction practices. Upon completion of construction, the replacement in-town reservoirs completed under the reservoir covering/burying program would be replanted with appropriate vegetation. Areas would be restored, where possible, with plantings of native species and other appropriate vegetation. Where appropriate, SPU would prepare a landscaping plan for individual projects.

B5. Animals

a. Checkmark any birds and animals that have been observed on or near the site or are known to be on or near the site:

Birds:	<input checked="" type="checkbox"/> hawk	<input checked="" type="checkbox"/> heron	<input checked="" type="checkbox"/> eagle	<input checked="" type="checkbox"/> songbirds	<input checked="" type="checkbox"/> other:
osprey, bald eagle, peregrine falcon, purple martin, owls (various species), pileated woodpecker, belted kingfisher, waterfowl species, Canada goose. Also typical urban species associated with residential and commercial development.					
Mammals:	<input checked="" type="checkbox"/> deer	<input type="checkbox"/> bear	<input type="checkbox"/> elk	<input checked="" type="checkbox"/> beaver	<input checked="" type="checkbox"/> other: California sea lion, river otter, muskrat, raccoon. Also a variety of urban-adapted species.
Fish:	<input checked="" type="checkbox"/> bass	<input checked="" type="checkbox"/> salmon	<input checked="" type="checkbox"/> trout	<input checked="" type="checkbox"/> herring	<input checked="" type="checkbox"/> shellfish
	<input checked="" type="checkbox"/> other: various freshwater and marine species.				

More specific information on birds and animals near individual sites would be determined during project-level environmental review. In general, the planning area has a variety of animals, including birds, mammals, and fish. Various water bodies provide habitat for a variety of fish, birds, shellfish, aquatic vegetation, and marine mammals.

Seattle and adjacent cities and suburbs are developed urban areas, with few areas of native vegetation and associated habitat remaining. Wildlife found in most urban and suburban areas consists of wildlife that can tolerate or benefit from close association with humans and habitat fragmentation. Several areas of wildlife habitat, however, remain in the parklands and open spaces. In contrast, the Cedar and Tolt Municipal Watersheds are largely undeveloped and support a greater diversity of native animals.

b. List any threatened or endangered species known to be on or near the site:

Several federal and state listed fish and wildlife species may be present in the planning area. These include:

- Puget Sound Chinook salmon – threatened
- Coastal Puget Sound bull trout – threatened
- Bald eagle: Pacific population – threatened
- Killer whale: Southern resident – endangered
- Humpback whale – endangered
- Steller sea lion: North Pacific population – threatened
- Marbled murrelet – threatened
- Puget Sound steelhead – proposed threatened

Of the listed species, Chinook salmon, bull trout, steelhead, bald eagle, and killer whale reside in the planning area. The humpback whale, Steller sea lion, and marbled murrelet do not inhabit the area but an occasional migratory animal may be observed.

When future projects are proposed, SPU would identify known threatened or endangered species, if present. SPU then would search appropriate databases of listed animal species and consult with appropriate agencies.

Steelhead in Puget Sound rivers were proposed in March 2006 for listing as threatened under the Endangered Species Act (ESA). After public and scientific input, a final determination will be made after one year whether to list Puget Sound Steelhead under the ESA. SPU would coordinate with the National Marine Fisheries Services to ensure that Puget Sound steelhead are included in project-specific consultation, as applicable.

Because many of the project sites are in urban areas that have been previously developed and native vegetation removed, the potential for impacts on threatened or endangered species is low at those developed locations. In-town reservoirs generally are located in urban areas where listed species, with the exception of bald eagles, are not likely to be found. Some infrastructure projects could cross rivers and creeks, potentially with listed salmonids. Larger infrastructure projects, such as the Chester Morse Lake Dead Storage Facilities Project, Cedar Moraine Safety Improvements Project, and Landsburg Flood Passage Improvements Projects, would occur on or near rivers and within forests with listed species.

SPU would evaluate potential impacts to, and mitigation for, threatened and endangered species during future environmental review and permitting of individual projects. The design, construction, and operation of all future SPU projects would comply with federal and state requirements for threatened and endangered species. SPU also would consult with appropriate agencies and Tribes as required.

In operating its surface water supply sources, SPU is obligated to meet instream flow requirements on the Cedar and South Fork Tolt Rivers to protect fisheries resources and aquatic habitat in those rivers. The proposed plan includes revised policies and programs to meet the instream flow requirements and performance commitments in Tribal, regional, state, and federal agreements and permits. For the Cedar River Municipal Watershed, SPU would continue to implement the 50-year Habitat Conservation Plan (HCP), which was agreed to with federal and state resource agencies in 2000. With completion of the HCP, the City was granted federal incidental take permits for its water management, hydropower, and land management operations. In addition, the 2006 agreement between the City and the Muckleshoot Indian Tribe provides for interim and long-term limits on diversions from the Cedar River. The proposed plan would not affect the HCP or the Muckleshoot Agreement.

c. Is the site part of a migration route? If so, explain.

Portions of the planning area provide an upland corridor for bald eagles traveling to and from foraging areas in Puget Sound or Lake Washington. Marbled murrelets winter on marine waters and nest in late successional/old growth forests during late spring and summer. Murrelets make daily trips to the ocean and nearshore areas to gather food. The planning area also is within the migration routes of many migratory bird species.

Bull trout, steelhead, and Chinook, chum, pink, and coho salmon use the Puget Sound nearshore as a migration corridor. Anadromous trout and salmon migrate through the area river systems, including the Snoqualmie, Tolt, and Cedar Rivers.

d. Proposed measures to preserve or enhance wildlife, if any:

Future SPU water system projects would be designed to minimize potential impacts on animals. Construction of future water system projects would include standard erosion control measures and BMPs. Vegetation would be restored, where possible, with plantings of native species and other appropriate vegetation that would benefit fish and wildlife in the area.

All future water system projects would be designed, constructed, and operated to meet applicable local, state, and federal regulatory requirements for fish and wildlife. SPU projects also would be designed to avoid or minimize potential impacts on biological resources. Prior to construction, each project would obtain applicable permits and approvals related to biological resources, such as the critical areas review by local jurisdictions, permits or variances under the local shoreline master program, and a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife. The permits could include conditions for mitigation of site-specific impacts on biological resources specific to individual projects, where applicable.

B6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

The programs and future projects under the proposed plan together would not require any major increase in regional long-term energy use. The proposed plan would not introduce any new water facilities that would use substantial amounts of energy, but would mostly modify existing infrastructure. Some future projects could require energy sources, although any potential increase in energy use would be unavoidable and would be minor compared to regional energy supplies. Electrical power would be supplied mostly through the existing power lines, and the electrical infrastructure within the vicinity of the existing water facilities would be adequate to handle future loads. One option of the Chester Morse Lake Dead Storage Facilities Project could replace existing on-site diesel generators with electric utility service, which likely would involve new electrical infrastructure for that site. The completed water system projects would not require any new, major power sources, and existing energy sources would be adequate.

Construction of future water system projects would use energy for construction equipment and vehicles, which would temporarily use electricity and gasoline/diesel fuel. Energy use during construction would be short term and would have a negligible impact on regional energy supplies.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

The proposed plan would not involve building large, new structures or planting vegetation that would block access to the sun for adjacent properties.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

Construction activities and operation of SPU facilities would include measures to conserve energy, such as selection of energy-efficient equipment and implementation of energy-efficient operational practices, where applicable. Construction contractors could use energy-efficient equipment and methods. The City of Seattle adopted a policy requiring all new construction and major renovations to be designed and built in a sustainable manner, and applicable projects would be evaluated based on the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Rating System. Future SPU projects and facilities would be consistent with the City's sustainable building policies, as applicable.

The proposed water conservation program includes some measures that also would reduce energy use (particularly through hot water saving), as well as wastewater flows. Water conservation measures would reduce the amount of hot water consumed for showering, clothes laundering, and other residential and commercial uses. Reducing the use of hot water would reduce energy use, which would be a positive impact.

B7. Environmental Health

Note: Under SEPA, environmental health covers several types of potential impacts that could affect human health. Environmental Health under this section of a SEPA Environmental Checklist evaluates primarily public health, toxic/hazardous materials, and noise. Environmental health also could be affected by water quality and air quality, which are evaluated in other sections of this checklist.

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe:

Implementation of the proposed plan would protect overall drinking water quality. Covering/burying existing in-town reservoirs would protect water quality in the SPU water system, which would reduce environmental health risks. Taken together, all of the water programs and future projects under the proposed plan would cumulatively improve public health. The long-term impacts would be positive. Long-term benefits for public health would occur at a slower rate if the proposed plan were not implemented.

Operation of individual water system projects anticipated under the proposed plan generally would not increase environmental health hazards in the long term. In general, water infrastructure projects typically would not require large amounts of hazardous materials, and any potential future releases would be minimal. One option of the Chester Morse Lake Dead Storage Facilities Project could replace existing on-site diesel generators with electric utility service, which would reduce the potential for spills of diesel fuel. Environmental health hazards could be encountered during construction, but any potential adverse impacts on environmental health would be short term and would be controlled by project-specific mitigation measures.

Construction of individual water system projects to implement the proposed plan could occasionally release environmental hazards due to leaks and spills from construction equipment. Small amounts of materials likely to be present during construction could include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, solvents, paints, and other chemical products. A spill of one of these chemicals could potentially occur during construction as a result of either equipment failure or worker error. Contaminated soils, sediments, or groundwater also could be exposed during excavation. If disturbed, contaminated substances could expose construction workers and potentially other individuals in the vicinity through blowing dust, storm water runoff, or vapors. Construction activities would be subject to applicable spill containment and cleanup procedures.

(1) Describe special emergency services that might be required.

Operation of future water system projects anticipated under the proposed plan likely would not require special emergency services. Emergency services could be required to clean up spills or respond to worker injuries during construction and, possibly, during maintenance of completed water facilities.

(2) Proposed measures to reduce or control environmental health hazards, if any:

Protocols for control and disposal of hazardous materials would be

evaluated during the SEPA review of individual SPU projects. In general, a Construction Contingency Plan and a Health and Safety Plan would be submitted by the contractor before work commences. A hazardous material and spill control plan also would be developed to control spills on construction sites.

If future water system projects are located in areas of suspected contamination, soil testing would be conducted prior to construction to determine the extent of potential contamination. Any contaminated soils would be excavated and disposed of in a manner consistent with the level of contamination, in accordance with federal, state and local regulatory requirements, by a qualified contractor(s) and/or City staff.

b. Noise

(1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Projects planned for implementation under the *2007 Water System Plan* could occur at various locations within the planning area (see Response A12 above). Existing noise levels include a variety of noise sources, and urban and industrial areas often have higher existing noise levels, while rural areas are relatively quieter. Transportation facilities are major sources of noise, and background traffic noise levels are highest along arterials and freeways with higher traffic volumes and speeds. The existing noise sources would not affect future water programs and projects under the proposed plan. Existing noise levels at SPU project sites would be evaluated during SEPA review of individual projects.

(2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

More specific information on potential types and levels of noise would be determined during project-level environmental review. Some future projects could generate noise, particularly during construction. Construction of future projects could result in localized construction noise, which would be a short-term impact and would be reduced with project-specific mitigation measures. Potential construction and long-term noise levels would be evaluated during future SEPA review, and the design and operation of SPU facilities would comply with any applicable local noise ordinances.

Potential long-term noise impacts could occur at above-ground SPU facilities adjacent to residences and other sensitive land uses. SPU's procedure is to comply with local noise ordinances by locating facilities underground where feasible, by enclosing or muffling facilities, or by installing noise attenuation equipment.

Potential in-town reservoir covering/burying projects anticipated under the proposed plan would not be major sources of noise. Covering or burying in-town reservoirs would not introduce new noise sources from the water reservoir itself and from associated equipment. One option of the Chester Morse Lake Dead Storage Facilities Project would construct a new enclosed pump station, which likely would reduce current noise levels of the existing

outdoor pumps. The existing pumps are located outside on a barge but are used rarely, generally only during drought conditions or testing.

Site preparation and construction of future projects would intermittently generate noise, which would be considered temporary or short-term impacts. Potential construction noise would be most noticeable at residences, institutions, and park/public open spaces near construction activities. Short-term noise from construction equipment would be limited to the allowable maximum noise levels of the City of Seattle's Noise Control Ordinance (SMC Chapter 25.08), King County Code (Section 12.88), or the applicable noise codes of other local jurisdictions where projects are located.

After completion of the future water system projects, occasional noise from equipment and vehicles used for on-going routine maintenance and repair may occur. Such noise would be limited to daytime hours, except for noise associated with responses to certain unanticipated emergencies.

(3) Proposed measures to reduce or control noise impacts, if any:

Construction of future water system projects would include reasonable mitigation measures, as appropriate, to reduce potential site-specific construction noise impacts. Reasonable construction mitigation could include restrictions on nighttime construction activities, mufflers and enclosures for equipment, turning off idling equipment, and locating equipment farther away from receptors. All construction work would be performed in compliance with the applicable local noise ordinances. Prior to the start of construction, SPU would coordinate construction activities with affected businesses, institutions, and residences that may be sensitive to construction-related noise, dust, or traffic.

SPU would evaluate site-specific impacts and propose mitigation measures, where necessary, during future SEPA review for individual projects. Future SPU facilities would be located, designed, and operated within applicable local noise ordinance standards.

B8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

More specific information on current uses of individual sites would be determined during project-level environmental review. In general, the planning area is characterized by urban uses in the Seattle area and suburbs, and more rural uses in unincorporated King County. Seattle and surrounding cities are developed urban areas. Existing uses include single-family and multifamily residences, commercial, industrial, recreation, and open space. Most city properties have been developed at urban densities, and existing uses are often mixed. Downtown areas often include many high rise developments. In contrast, the Cedar and Tolt Municipal Watersheds are mostly undeveloped.

Future SPU projects could be located in areas characterized by a variety of land uses. In-town reservoirs are located generally in landscaped open spaces or in parks, surrounded by residential development. O&M projects could be located in areas ranging from urban to rural. Land and shoreline uses potentially affected by future SPU projects would be identified when individual water system projects are

reviewed under SEPA and local land use permitting processes.

b. Has the site been used for agriculture? If so, describe.

The City of Seattle and other nearby cities have not been used for large-scale agriculture in recent history. Because much of the planning area has been previously developed for urban and suburban uses, prime farmland is no longer present within Seattle and adjacent cities. Remaining areas of prime farmland are located primarily outside the urban growth areas of Seattle, such as areas of the Snoqualmie and Green River Valleys. Portions of unincorporated King County are currently used for agriculture.

c. Describe any structures on the site.

The Seattle urban area is developed with a wide range of structures, ranging from single-family residences to high rise office towers to large industrial structures. Rural areas of unincorporated King County have fewer structures. In-town reservoir facilities include a secured, lined reservoir structure and associated disinfection and maintenance facilities. Most pipelines are below ground and generally have no above-ground structures.

d. Will any structures be demolished? If so, what?

Few individual projects under the proposed plan would require demolition of existing structures. In general, future projects associated with maintenance or replacement would not require demolition of structures. In-town reservoir burying projects would demolish the existing reservoirs but would not demolish structures outside the reservoir site. Likewise, potential decommissioning of in-town reservoirs would require demolition. Future projects under the proposed plan would be located and designed to avoid demolition of existing structures where possible. Any structures potentially to be demolished, if required, would be identified during future design and SEPA review of individual projects.

e. What is the current zoning classification of the site?

The proposed planning area encompasses numerous zoning classifications within the City of Seattle, other cities, King County, and Snohomish County. Existing zoning ranges from urban designations in the cities to rural designations in unincorporated King County. Zoning around in-town reservoirs is predominantly residential, while zoning in the vicinity of other infrastructure projects can range from rural to urban. SPU's Cedar and Tolt Municipal Watersheds are mostly forest designations. Zoning classifications of potential sites would be identified when individual water system projects undergo future SEPA and local land use reviews.

Zoning classifications are determined by the local jurisdictions. The local jurisdictions in the planning area include King and Snohomish Counties, and the cities of Seattle, Shoreline, Edmonds, Lake Forest Park, Kenmore, Bothell, Woodinville, Kirkland, Redmond, Issaquah, Bellevue, Mercer Island, Burien, Normandy Park, Des Moines, Tukwila, Renton, Kent, SeaTac, Auburn, North Bend, Duvall, and Carnation.

f. What is the current comprehensive plan designation of the site?

Comprehensive plan designations within the planning area are diverse. The designations of potential sites would be identified when individual projects undergo future SEPA and local land use reviews. See also the discussions for land use in Section B8.a and for zoning in Section B8.e above.

g. If applicable, what is the current shoreline master program designation of the site?

The planning area contains both freshwater and marine shorelines. Some future water system projects could be located in the shoreline zone, and could be subject to the local shoreline master program (SMP). Shoreline resources regulated under the SMP include all marine waters, larger streams and lakes, associated wetlands and floodplains, and upland areas called shorelands that extend 200 feet landward from the edges of these waters.

Shoreline designations in the applicable SMPs would be identified when individual projects are reviewed under SEPA and shoreline regulations. If a future project were sited within regulated shorelines, a shoreline substantial development permit, variance, or conditional use permit could be required.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

The planning area contains environmentally sensitive areas. Some future projects could affect environmentally sensitive areas, and be subject to local critical areas regulations. Critical areas can include geologic and seismic hazards, flood prone areas, riparian corridors, wetlands, fish and wildlife habitat conservation areas, and abandoned landfills and mines. Critical areas are mapped by the local jurisdictions.

In-town reservoirs are generally not located in sensitive areas and the sites have already been developed. The presence of potential critical areas and site-specific impacts and mitigation would be evaluated when SPU projects are reviewed under future SEPA and permitting.

i. Approximately how many people would reside or work in the completed project?

The proposed plan does not include any residential development, and therefore people would not reside in the future projects.

j. Approximately how many people would the completed project displace?

It is not anticipated that implementation of the proposed plan would displace any people. Most future water system projects would occur at existing SPU facility locations and would not likely displace any people or properties. The design of future projects would avoid displacements where possible.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Displacement impacts are not anticipated, and therefore displacement mitigation measures would not be required. Future projects to implement the proposed plan would be designed to avoid or reduce potential displacements, where possible. If any displacements are necessary, SPU would comply with applicable local, state, and federal guidelines for relocation assistance. Potential displacement impacts and mitigation would be evaluated during future design and environmental review when individual water system projects are proposed.

1. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Prior to construction of any future projects, SPU would apply for and obtain the applicable land use permits and approvals. Similarly, SPU would obtain any applicable shoreline substantial development permit, variance, or conditional use permits where applicable. Design, construction, and operation of the individual water facilities would follow local zoning and development standards for mitigating potential impacts on adjacent land uses. Future individual permits could include site-specific conditions or mitigation measures to meet the requirements of the applicable land use, zoning, and shoreline codes and policies.

The City has prepared and adopted Seattle's *Comprehensive Plan*, which was last updated in 2004. The *Comprehensive Plan* contains policies on utilities and identifies areas for future growth, which have been sources of direction for the SPU's water planning. The proposed plan is consistent with the goals and the policies of the Utilities Element of the *Comprehensive Plan*. Any population growth facilitated by implementation of the *2007 Water System Plan* generally would occur in areas identified for future development in Seattle's *Comprehensive Plan* and in the comprehensive plans of other local jurisdictions.

The *2007 Water System Plan* is consistent with the requirements of the Growth Management Act (GMA) and local and regional land use plans. Any SPU actions themselves would not encourage land or shoreline uses that are incompatible with existing plans. Future land and shoreline uses are determined by local land use plans, zoning codes, and development regulations, not by SPU activities.

B9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

The proposed plan would not provide any housing units.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Most projects under the proposed plan would be located at existing SPU facilities, which do not have any housing. The in-town reservoir covering/burying program would occur within the sites of existing in-town reservoirs and would not require any acquisition of adjacent housing. It is not anticipated that any housing units would be eliminated or displaced under the proposed plan.

c. Describe proposed measures to reduce or control housing impacts, if any:

Implementation of the proposed plan is not expected to result in any displacement impacts on housing. However, housing impacts and mitigation would be evaluated during the review of individual projects, as applicable.

B10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas? What is the principal exterior building material(s) proposed?

Future water system projects under the proposed plan would mostly modify existing SPU facilities, and would require few new, large, or tall structures. Potential in-town reservoir covering/burying projects would not introduce new,

elevated structures. At in-town reservoir sites, the surrounding fences and/or small accessory buildings typically would be the tallest structure(s).

The height, size, and building materials of new or modified water facilities would be evaluated during design and SEPA review of individual projects. All future projects under the proposed plan would be subject to the height restrictions of the local zoning codes and development regulations.

During construction of potential future water facilities, the project sites could be cleared and graded. Exposed earth, materials, and construction vehicles could be temporarily visible from adjacent properties and roadways. Because most projects would occur in sites already developed for existing SPU facilities, minimal vegetation would be removed during construction. Any construction impacts on aesthetics would be short term.

b. What views in the immediate vicinity would be altered or obstructed?

Below-ground installations would not affect views. Some above-ground water facilities would be modified, mostly within existing SPU facility sites, which would not substantially alter or obstruct existing views. Construction activities could result in short-term aesthetic impacts, depending on the future project and the characteristics of the site and adjacent properties.

Potential impacts on aesthetics and views could be associated with the in-town reservoir covering/burying projects and decommissioning under the proposed plan. Some existing in-town reservoirs, with views of open water, currently provide visual amenities for surrounding residential areas. Such views of open water would be replaced by views of open space, with revegetated and landscaped areas. Any potential impacts on views and aesthetics would be evaluated when individual projects undergo SEPA and permitting reviews. SPU would conduct detailed analyses of potential aesthetic impacts and mitigation during the design phase, and affected neighborhoods would have the opportunity for public comments.

c. Proposed measures to reduce or control aesthetic impacts, if any:

The design, height, and size of new projects and modifications of the individual water facilities would meet the applicable development regulations of local jurisdictions. Exterior building materials would be selected to be compatible with each project site. Mitigation might also include additional landscaping to provide a visual buffer between a SPU facility and adjacent viewers.

B11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Implementation of the proposed plan would not introduce major new sources of light or glare. Minimal new lighting might be required on a project-specific basis, and its potential effects would be localized. Most smaller O&M projects would not be long-term sources of light or glare. In-town reservoir covering/burying projects would produce little additional light or glare, except for possible additional lighting for security purposes.

Construction activities could be short-term sources of light and glare, although most construction would occur during daytime hours. This is because most construction activities would be limited by the local noise ordinances to avoid

nighttime hours. The lighting requirements for future individual projects would be determined during the design phase to comply with current lighting standards and local codes.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Future projects would not be major sources of long-term light or glare. Any new light or glare under the proposed plan would be minimal and would not increase safety hazards or interfere with views.

c. What existing off-site sources of light or glare may affect your proposal?

Future SPU projects under the proposed plan would not be affected by other existing off-site sources of light or glare.

d. Proposed measures to reduce or control light and glare impacts, if any:

SPU would evaluate site-specific impacts and propose mitigation measures, where necessary, during future SEPA review and permitting for individual projects. Future SPU facilities would be located, designed, and operated to comply with lighting standards and code requirements that generally require that light fixtures be installed to optimize on-site lighting and minimize off-site impacts.

B12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

More specific information on recreational opportunities near individual sites would be determined during project-level environmental review. In general, the planning area has a variety of recreational opportunities, including parks, trails, gardens, playfields, swimming pools, community centers, golf courses, school playgrounds, fishing piers, and private health clubs. Puget Sound, Lake Washington, Lake Union, and other water bodies also offer water related recreation such as swimming, boating, fishing, use of public beaches, and scuba diving.

Some SPU water facilities themselves provide recreation opportunities. In-town reservoirs are located usually in urban areas, and some provide open areas and aesthetic benefit for neighbors and users of adjacent recreational facilities. The existing in-town reservoirs themselves are closed for public use. Several pipeline rights-of-way provide informal recreation opportunities as trail corridors for pedestrian, bicycle, and equestrian users.

b. Would the proposed project displace any existing recreational uses? If so, describe.

Future water infrastructure projects under the proposed plan are not anticipated to permanently displace any existing recreational resources. During construction, localized recreational uses could be temporarily affected at project sites near recreational resources. Any potential impacts on recreation would be evaluated when individual projects undergo SEPA and local land use reviews.

For in-town reservoir covering/burying projects, users of adjacent recreation resources could be affected by changes in appearance during construction and operation. The future appearance of in-town reservoir sites would be open space,

which would have minimal adverse impacts on adjacent recreational users. Reservoir projects are not proposed to expand into adjacent areas and would remain within the existing sites, and would not displace any adjacent recreational resources.

Once a reservoir covering/burying project is completed or an existing reservoir is decommissioned, SPU does not have any plans for future activity on the site. Covered or buried reservoirs could present opportunities for future park use of the reservoir site, although future park development would not be related to this SPU proposal. Future park proposals would be evaluated separately by Seattle Parks and Recreation during future park planning and SEPA review.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Impacts on recreational opportunities would be avoided wherever possible, and would be addressed when individual projects are proposed. Short-term construction impacts would be minimized to the maximum extent possible. Additional landscaping could be provided, if warranted, to provide a visual buffer between a covered/buried reservoir and adjacent recreational users. SPU would evaluate site-specific impacts and propose mitigation measures, where necessary, during future SEPA review and permitting for individual projects.

B13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

Future projects planned for implementation under the *2007 Water System Plan* could occur at various locations within the planning area (see Response A12 above). Urban areas include a number of landmarks, properties, and districts that are listed on, or proposed for, national, state, and local preservation registers. In addition, the planning area has potential for Native American artifacts. More specific information on the potential to encounter historic, cultural, or archaeological resources would be assessed when individual water system projects are proposed and undergo future SEPA review.

When future projects are proposed, SPU would review preservation registers and contact organizations with jurisdiction over historic and cultural resources. SPU would review the locations of future projects with the City of Seattle Landmarks, Washington Heritage Register, and National Register of Historic Places. In addition, SPU would contact local Tribes, appropriate local jurisdiction, and the Washington State Department of Archaeological and Historic Preservation (DAHP).

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

Historic, archaeological, or cultural resources would be identified during environmental review of individual projects. For future projects within the Cedar River and Tolt River Municipal Watersheds, the City's GIS inventories of cultural resources within those watersheds also would be reviewed. See Response B13.a above.

c. Proposed measures to reduce or control impacts, if any:

Implementation of individual projects arising under the proposal could have the potential to encounter historic and cultural resources, if present. Prior to construction of individual projects, SPU would assess the potential for disturbance of cultural, archaeological, or historic sites.

For any future projects within the Cedar River Municipal Watershed, any historic or cultural resources would be managed within the guidelines of the most current *Cedar River Municipal Watershed Cultural Resources Management Plan*. SPU also is developing a Cultural Resources Management Plan for the Tolt River Municipal Watershed, which would be applied to future projects within that watershed.

If any cultural, archaeological, or historic resources were encountered during excavation, SPU would immediately consult with the state and local historic preservation offices and with affected Tribes regarding site-specific mitigation measures. Work in that immediate area would be suspended, and the find would be examined and documented by a professional archaeologist or historian. Decisions regarding appropriate mitigation measures and further action would be made before construction in the area of discovery is allowed to resume.

B14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

More specific information on public streets and other transportation facilities near individual sites would be determined during project-level environmental review. In general, the planning area has a variety of transportation facilities, including roadways, bicycle paths, railroads, airports, ferries, and public transit.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

See B14.a above. Transit use and facilities near project sites would be identified during SEPA review of individual projects. Transit stops generally would not be affected by operation of water system projects anticipated under the proposed plan.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Future water system projects under the proposed plan would require few parking spaces. Future water system projects are not anticipated to substantially alter the number of existing parking spaces. Construction of future water system projects could temporarily displace on-street parking, which would be evaluated during future environmental review and permitting of individual projects.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

More specific information on new or improved roadways, if required, would be determined during environmental review and permitting of individual projects. Future projects anticipated under the proposed plan would generate minimal traffic during operation. Most SPU water facilities would continue to use the existing roadways and access points that serve the project sites.

Water pipelines, which often run within public rights-of-way, occasionally could affect roads or streets by overflowing water should such pipelines fail. Replacement or repair of these pipelines also could result in temporary disruptions to local traffic and access.

Construction of individual projects could occur near or within roadways, which could temporarily disrupt traffic. Access could be restricted to adjacent residences and businesses. Road restrictions also could temporarily interfere with transit, ferry, and emergency service vehicles. To reduce construction impacts, individual projects would include appropriate mitigation measures to minimize traffic disruptions and maintain accesses.

The proposed plan includes completion of studies for Kerriston Road. SPU proposes to conduct a comprehensive analysis of the potential risks presented by public access on Kerriston Road within the Cedar River Municipal Watershed. Any potential changes to Kerriston Road would undergo SEPA review and would be coordinated with King County and affected landowners.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Future water system projects under the proposed plan would not result in long-term use of water, rail, or air transportation. Construction of individual projects could occur in the immediate vicinity of water, rail, and air transportation, which could result in temporary disruptions. Any water, rail, or air transportation facilities potentially affected would be evaluated during the design and environmental review of individual projects. Potential impacts and mitigation would be coordinated with affected transportation providers.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Operation of future projects under the proposed plan would generate few vehicular trips. The number of long-term vehicular trips and peak volumes are not expected to increase substantially as a result of this proposal. Construction activities would temporarily generate vehicle trips for workers and hauling materials. The number of construction vehicles is anticipated to be relatively small compared to traffic on local roadways. The impact of construction vehicles would be evaluated during SEPA review and permitting for individual projects.

g. Proposed measures to reduce or control transportation impacts, if any:

Construction of individual projects would include mitigation measures to reduce short-term impacts on affected roadways and other transportation facilities. Accesses to affected residences and businesses from local roadways would be maintained during the construction periods. Vehicular travel along local roadways also would be maintained to allow passage of emergency service vehicles. For example, construction contracts could stipulate that contractors use flaggers and traffic controls to maintain vehicle access if lanes were temporarily closed during construction.

SPU would coordinate future projects with the appropriate local jurisdictions to develop construction plans and to obtain any street use permits. Construction impacts and mitigation measures would be evaluated during SEPA review of the individual water system projects, and a Traffic Control Plan typically would be

prepared. Traffic plans would ensure continued circulation and access during construction. Plans might also include provisions to address worker parking, such as requirements that workers carpool to the job site or that the contractor provide worker shuttles from off-site parking locations. Construction activities would be coordinated with affected landowners, local businesses, emergency service providers, transit services, other local jurisdictions, and the local jurisdictions.

B15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

Implementation of the proposed plan would not result in a long-term increase in the need for public services. Future water system projects would result in minimal impacts on public services. Occasional spills during construction and operation of water facilities could require responses from emergency service providers. Construction activities could affect local traffic circulation and access on public streets, which could temporarily affect emergency service vehicles.

- b. Proposed measures to reduce or control direct impacts on public services, if any.**

Because public services would not be directly affected, mitigation measures are not anticipated. Any potential spills during construction and operation of future SPU projects would be contained and cleaned up under applicable state and local provisions. During construction, access and circulation would be maintained for emergency service vehicles.

B16. Utilities

- a. Check utilities currently available at the site, if any:** ☐ None
☒ electricity ☒ natural gas ☒ water ☒ refuse service
☒ telephone ☒ sanitary sewer ☒ septic system
☒ other: cable, drainage

More specific information on utilities available at individual sites would be determined during project-level environmental review. In general, the planning area has a variety of utilities, including those checked above.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.** ☐ None

Implementation of the proposed plan would directly affect the water utility services provided by SPU. The other utility most likely to be affected by long-term operation of future projects is electricity. Water facilities like those contemplated under the proposed plan typically use electricity. Pump stations would consume the most energy, although energy use would not substantially increase in the long term and would be minor compared to regional demand (see Section B6 above). Electrical power would be supplied through the existing power lines; and the electrical infrastructure within the vicinity of the pump stations would be adequate to handle future loads. One option for the Chester Morse Lake Dead Storage Facilities Project could replace existing on-site generators with electrical utility service, which could require new power lines to the site. Long-term demands on water, refuse, telephone, and other utilities would be negligible.

Repairing or replacing water lines could temporarily disrupt other utilities, such as

water, sewer, drainage, power, and communication utilities. Potential impacts during construction would be short term and site specific, and would be determined when individual projects are proposed. Construction of individual water system projects required to implement the proposed plan could temporarily disrupt utility service in the immediate area. To reduce construction impacts, individual projects would include site-specific mitigation measures to minimize disruptions to utilities, where applicable. SPU would work cooperatively with the various utilities and service providers to ensure continued service during construction.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: *[signed by Joan M. Kersnar]* Date: *[7/28/06]*
Joan M. Kersnar, P.E
Project Manager
Seattle Public Utilities

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

Note: The SPU *2007 Water System Plan* is a nonproject action under SEPA. It is a long-range water system plan that includes policies, programs, and projects designed to address SPU water system needs. No specific projects, however, would be implemented directly as a result of adoption of the *2007 Water System Plan*. The following sections of this SEPA Environmental Checklist address the nonproject nature of the proposed plan, and potential impacts are evaluated at the long-term, broader level. This Subpart D of the checklist does not discuss site-specific impacts and mitigation for future individual projects (e.g., construction activities) that may result subsequent to adoption of the proposed plan. As described in Subpart B of the checklist, any projects to implement the *2007 Water System Plan* would undergo future environmental review and permitting, where applicable, at the time the individual projects are proposed for the specific action.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

As outlined in Response A11 above, the *2007 Water System Plan* is a long-range water system plan, which would not result directly in the implementation of specific projects. Therefore, the proposed plan itself would be unlikely to increase long-term discharges to water (see B3); emissions to air (see B2); production, storage, or release of toxic or hazardous substances (see B7.a); or production of noise (see B7.b). Overall, the proposed plan would not likely increase regional discharges of pollutants to the environment.

Proposed measures to avoid or reduce such increases are:

Because the proposed plan would not result in increased discharges to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise, no measures to avoid or reduce such increases are proposed.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

The *2007 Water System Plan* is a long-range water system plan that would not result directly in the implementation of specific projects. Therefore, the proposed plan itself would be unlikely to adversely affect plants, animals, or fish, including threatened and endangered species (see B4 and B5).

As described in Response A11 above, the proposed plan includes programs that would increase SPU's water conservation goals. Reductions in water use through conservation would reduce the potential for additional future surface water withdrawals which would potentially benefit instream flows and fishery resources, including endangered salmonids, along with aquatic and riparian plants and animals. Additionally, there are some policies in the *2007 Water System Plan* that could benefit biological resources, including the environmental stewardship policy and the triple-bottom-line approach to asset management. Overall, the proposed plan would result in some long-term improvement for fish and aquatic habitat.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

Long-term adverse impacts on plants, animals, fish, and marine life are not expected under the *2007 Water System Plan*, and therefore mitigation measures are not proposed.

3. How would the proposal be likely to deplete energy or natural resources?

The *2007 Water System Plan* is a long-range water system plan that would not result directly in the implementation of specific projects. Therefore, the proposed plan would be unlikely to directly deplete energy or natural resources (see B6). The proposed plan itself would not require any additional long-term energy sources.

As described in Response A11 above, SPU has determined that it would not likely need additional sources of water supply before 2060. Therefore, SPU does not propose development at this time of major new water sources that could deplete natural resources. SPU would continue to implement programs to meet water conservation goals, which would further reduce the potential for depletion of water resources and energy supplies.

Proposed measures to protect or conserve energy and natural resources are:

The *2007 Water System Plan* implementation would not result in long-term, adverse impacts on energy and natural resources, and mitigation measures are not proposed.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

The *2007 Water System Plan* is a long-range water system plan that would not result directly in the implementation of specific projects. Therefore, the proposed plan would be unlikely to directly use or affect environmentally sensitive areas or areas designated for government protection (see B8, B12, and B13). The proposed plan also would be unlikely to adversely affect threatened and endangered species habitat (see B4 and B5).

The proposed plan includes programs that would increase SPU's water conservation goals, which may be of benefit in maintaining instream flows. Maintaining instream flows would directly benefit habitat for endangered salmonids, along with aquatic and riparian habitat used by other listed species, such as the bald eagle. Benefits to sensitive areas from water conservation would occur at a lower level if the proposed plan were not implemented.

Proposed measures to protect such resources or to avoid or reduce impacts are:

Implementation of the *2007 Water System Plan* would not result in adverse, long-term impacts on environmentally sensitive areas or areas designated for government protection, and mitigation measures are not proposed.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The *2007 Water System Plan* is a nonproject plan of water policies and future actions that would not directly affect land and shoreline use in the planning area (see B8). The proposed plan itself would not change land and shoreline uses or designations. The proposed plan includes policies that would increase SPU's water conservation goals, which could benefit instream flows and shoreline uses.

The proposed plan is consistent with the requirements of the Growth Management Act (GMA) and local and regional land use plans. Any SPU actions themselves would not encourage land or shoreline uses that are incompatible with existing plans. Future land and shoreline uses would be determined by local land use plans, zoning codes, and development regulations, not by SPU activities.

Proposed measures to avoid or reduce shoreline and land use impacts are:

The nonproject actions associated with the *2007 Water System Plan* would not result in direct or indirect adverse impacts on shoreline and land uses, and therefore mitigation measures are not proposed.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

The *2007 Water System Plan* is a long-range water system plan that would not result directly in the implementation of specific projects. Therefore, the proposed plan would be unlikely to directly increase demand on transportation (see B14), public services (see B15), or utilities (see B16). The proposed plan itself would not have any effects on transportation, public services, or non-water utilities.

The proposed plan could affect the water utility services provided by SPU. As described in Response A11 above, the SPU water service area would remain the same. SPU also has determined that it would not likely need a new source of water before 2060. The place of use of the Cedar River and Lake Youngs water rights claims would change to the SPU service area, as allowed under the 2003 Municipal Water Law. The proposed plan also includes policies that would increase SPU's water conservation goals, which would help decrease future demand on SPU's water supply system. The in-town reservoir covering/burying projects would improve the quality and security of the water supply. The proposed plan's policies, programs, and projects would address SPU's present and future needs, which would be a positive impact on utilities.

In planning to meet future water demand, it is necessary to coordinate with other planning efforts to ensure consistency. These include the coordinated water system plans in King County, water system plans of SPU's wholesale customers, the King County COMPLAN, water system plans of adjacent water purveyors, King County's Regional Wastewater Services Plan, Seattle's Comprehensive Plan, and watershed plans. SPU has determined that the proposed plan would be consistent with these water planning efforts. Each of these plans and their relevance to SPU's water resources are described in Chapter 2 of the *2007 Water System Plan*.

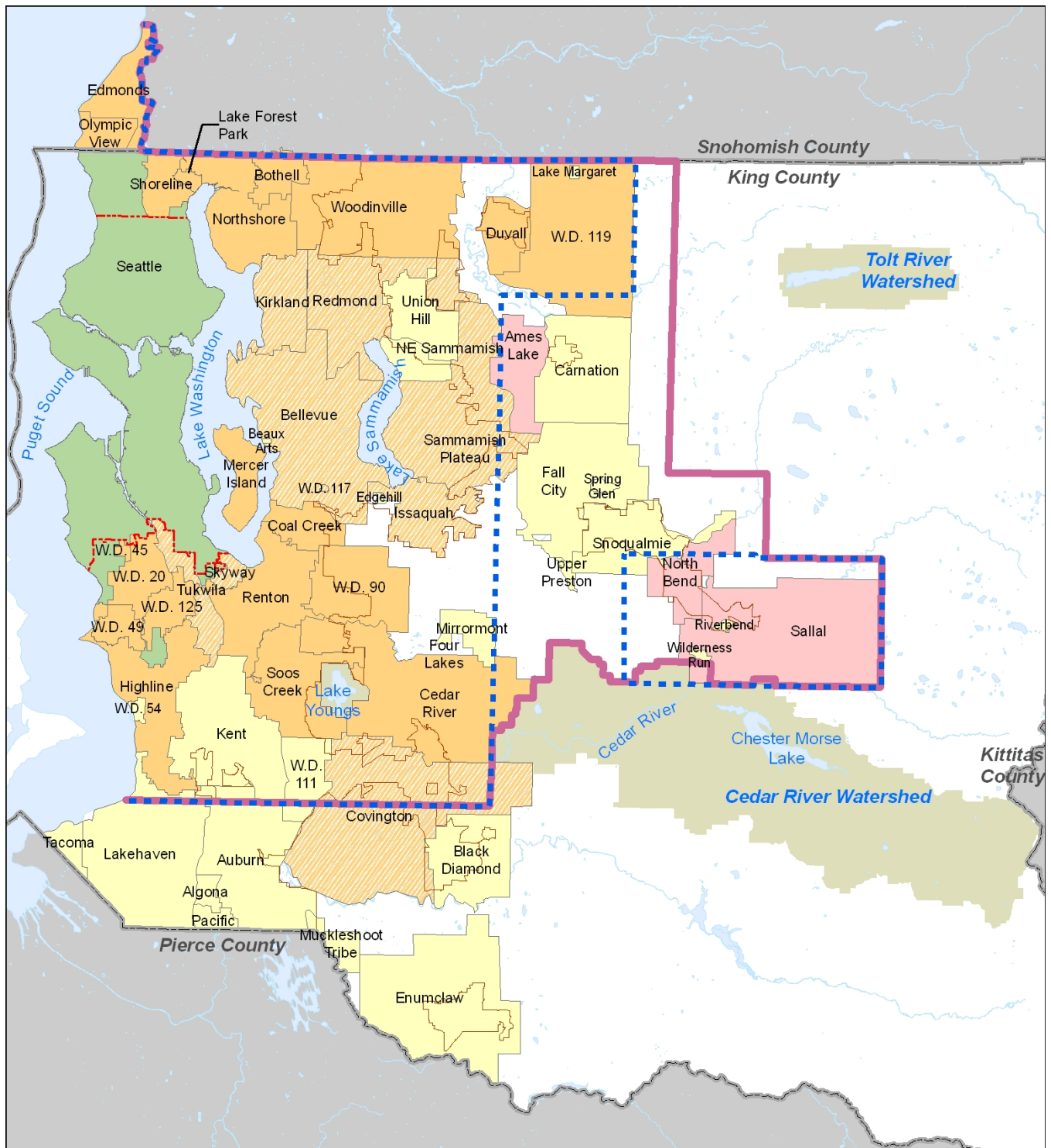
Proposed measures to reduce or respond to such demand(s) are:

The nonproject actions associated with the *2007 Water System Plan* would not result in long-term, adverse impacts on transportation, public services, and utilities, and therefore mitigation measures are not proposed.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

SPU, in implementing the *2007 Water System Plan*, would comply with all applicable local, state, and federal laws and regulations. The proposed plan would be consistent with, and supports, all local, state, or federal laws or requirements for the protection of the environment. The proposed plan also would not affect the Habitat Conservation Plan for the Cedar River Municipal Watershed, and would be consistent with Tribal treaty rights and specific agreements SPU has with Tribal governments.

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Seattle Public Utilities Water Service Area



- Service Area Boundary
- - - Original Cedar River Water Right Claim Place of Use
- - - Seattle City Limits
- Urban Growth Boundary
- Municipal Watersheds
- Water Bodies

Service Area

- Seattle Retail Service Area
- Wholesale Customers
- Cascade Water Alliance Members
- Potential New Customers
- Others



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